

# **Comparison of Child Reporting in the American Community Survey and Federal Income Tax Returns Based on California Birth Records**

by

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## Abstract

This paper takes advantage of administrative records from California, a state with a large child population and a significant historical undercount of children in Census Bureau data, dependent information in the Internal Revenue Service (IRS) Form 1040 records, and the American Community Survey to characterize undercounted children and compare child reporting. While IRS Form 1040 records offer potential utility for adjusting child undercounting in Census Bureau surveys, this analysis finds overlapping reporting issues among various demographic and economic groups. Specifically, older children, those of Non-Hispanic Black mothers and Hispanic mothers, children or parents with lower English proficiency, children whose mothers did not complete high school, and families with lower income-to-poverty ratio were less frequently reported in IRS 1040 records than other groups. Therefore, using IRS 1040 dependent records may have limitations for accurately representing populations with characteristics associated with the undercount of children in surveys.

**Keyword:** administrative records, population estimates, undercount of children

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## **Introduction**

The U.S. Census Bureau acknowledges the undercount of children in its surveys, which can result from missing entire housing units or households or incomplete reporting of households. This undercounting negatively impacts funding for critical programs, like Head Start and Children’s Health Insurance Programs (CHIP), and may bias estimates such as the percentage of children living in poverty (Reamer 2019; Murphy et al. 2018; Fernandez et al. 2018). To address this issue, the Census Bureau is engaged in research to improve child coverage in surveys and understand the causes of undercounting (Jensen 2022; U.S. Census Bureau 2021). Unreported children often differ in characteristics from reported ones, and reporting rates vary significantly by age, with children under five years old being the least reported group (U.S. Census Bureau 2024). Moreover, coverage rates also vary by race, with Non-Hispanic White children having the highest reporting rates (O’Hare et al. 2019). Complex household structures are associated with lower reporting rates as well (O’Hare et al. 2019; Fernandez et al. 2018; Jensen et al. 2018).

The American Community Survey (ACS) conducted by the Census Bureau gathers demographic and economic data from individuals and households, covering aspects like age, income, and household composition. While the ACS provides estimates of children based on a sample of the U.S. population, discrepancies may exist compared to administrative records, such as birth certificates, which are considered comprehensive sources detailing births, parent-child relationships, and demographic details. California, with the largest share of U.S. children, also exhibits notable undercounting among young children in Census Bureau surveys (U.S. Census Bureau 2022; O’Hare et al. 2019). This study focuses on California as a case example to explore differences between children identified in state birth records, children reported in Census Bureau surveys, and those reported in Internal Revenue Service (IRS) 1040 records. This analysis adds

to research at the Census Bureau and other federal efforts to evaluate the utility of combining survey data, IRS data, and other administrative data to improve surveys and create and improve estimates (Bee et al. 2019; Jones et al. 2019; Foster et al. 2018; Office of Tax Analysis 2021; Brady et al. 2021).

## **Data**

This analysis used California birth records, California infant mortality records, the ACS, the Census Bureau Numerical Identification file (Numident), the Census Household Composition Key (CHCK), and IRS Form 1040 (U.S. Individual Income Tax Return) records. The Census Bureau's Person Identification Validation System (PVS) was used to assign individual Protected Identification Keys (PIKs) for parents and children using a probabilistic matching algorithm and personally identifiable information (Wagner et al. 2014). This paper analyzes the efficacy of using IRS 1040 records to observe child undercounting based on whether parents and children could be linked to the ACS and IRS 1040 records using PIKs.

### *California birth records*

The restricted California birth records used in this analysis span from 1989 to 2019, with about 16.5 million birth records. Ninety-eight percent of children and 84% of mothers in these records received a PIK. Fathers had a much lower PIK assignment rate (41%) before 2005 due to insufficient personally identifiable information for fathers in the birth records. Consequently, no PIKs were assigned for fathers in the birth records from 1989 to 1996. For birth records from 1997 to 2004, the father's first name was not provided. Beginning in 2005, PIK assignment rates for fathers increased because the father's first name was provided.

The following data from the birth records were used to characterize reported and unreported children based on factors known to be associated with the undercounting of children:

- Child’s birth date, to calculate each child’s age (U.S. Census Bureau 2021; Griffin et al. 2020);
- Mother’s birth country (Johnson 2022; Fernandez et al. 2018); and
- Mother’s race and Hispanic ethnicity (O’Hare et al. 2019; 2016).

*Death data obtained from the Census Bureau Numident file and California Linked Birth file*

The Numident file is an administrative record of interactions with the Social Security Administration (SSA) and contains reported death date for individuals (Finlay et al. 2021). The Census Bureau creates the Numident file based on the SSA file by removing names and social security numbers and replacing them with PIKs. The Numident file was linked to the California birth records by PIK. Additionally, infant mortality data from the California Department of Health Care Access and Information’s Linked Birth File for children born from 1991 to 2011 were used. Birth records were excluded from this analysis when the recorded death date for the child in the Numident or infant mortality records occurred before the expected ACS response date, as those children should not be reported on the ACS.

*Census Household Composition Key (CHCK)*

The CHCK is a Census Bureau dataset that links child and parent PIK, beginning with births in 1997 based on Numident data received from the SSA, the 2010 Census Unedited File, IRS 1040 and 1099 files, the Medicare Enrollment Database, the Selective Service System, Indian Health

Service data, the Department of Housing and Urban Development's Public and Indian Housing Information Center and Tenant Rental Assistance Certification System, and USPS National Change of Address data (Brown et al. 2023; Genadek et al. 2022). Each CHCK vintage includes individuals aged 0-19. The California birth records were linked to the CHCK 2016-2022 data files by child PIK. When a parent's PIK was missing from the birth records but appeared in the CHCK, the parent PIK from the CHCK was linked to the child record. This augmentation of parent PIKs was beneficial for birth records missing the father's PIK, as mentioned earlier. When linked, about 18% of the California birth records did not have a father's PIK but had a PIK for the father in the CHCK (Aldana 2022). As Genadek, Sanders, and Stevenson (2022) suggest, this analysis uses the most recent parent-child links observed in the CHCK for each child.

#### *American Community Survey (ACS)*

This analysis uses unweighted ACS microdata from 2005 to 2019. These records had a PIK rate of 95%. All ACS records with assigned PIKs were used for linkage to the California birth records, regardless of state, to include children who were born in California but lived in another state at the time of the ACS response. Additionally, while this analysis uses mothers' characteristics from the birth records such as education and race, the results still include children who were not reported as living with their mother in the ACS and children whose mothers did not receive PIKs. Although the ACS responses include age data, age misreporting could affect this analysis because it would change the number of children reported in each age group (Fernandez et al. 2018). Given the significant undercount of children under five years old and to avoid age misreporting from ACS responses, I calculated each child's age at the time of the ACS response using the date of birth from their birth record. Only children ages 0-17 at the time of the

ACS response date were included in the analysis. I also excluded children from the analysis if the child's birthdate from their birth record was after the ACS response date, as those children could not have appeared in the ACS response.

The following data from ACS responses were used to characterize reported and unreported children based on factors known to be associated with the undercounting of children:

- Ease of speaking English (Walejko et al. 2019; Fernandez et al. 2018);
- Presence of subfamilies and non-related persons in the household as indicators of household complexity (Griffin et al. 2020; Jensen et al. 2018);
- Poverty status (Fernandez et al. 2018);
- Collection mode (O'Hare et al. 2019).

#### *IRS Form 1040 Data*

IRS data is available for improving surveys by approved internal projects through Section 6103(j) of Title 26. This analysis uses filer and dependent claiming information data from IRS Form 1040 (U.S. Individual Income Tax Return). The IRS 1040 records were used for tax years 2005 through 2019 for electronic and paper filings with up to four dependents. These records had a PIK rate of 97%. The 1040 Electronic Filers dataset includes information for filers with more than four dependents, so all available years were used (2005 and 2008 through 2012). The Electronic Filers data had a PIK rate of over 99%. The Electronic Filers dataset was replaced by the Modernized e-File (MeF) dataset in later years, so I used the MeF for 2011 through 2019 to include information for filers with more than four dependents. The MeF records had a PIK rate of 99%. While 1040 records provide income data, this analysis used ACS income responses to

determine household income because very low-income families are not required to file a 1040 form under certain conditions (Internal Revenue Service 2024).

## **Methods**

Parents and children from California's birth records were linked to children ages 0 to 17 in the ACS by PIK. All birth records were linked to all ACS records as long as the child would be under 18 at the time of the ACS response date. This process created a universe of ACS households where at least one parent or child PIK from the California birth records was found in the ACS. Less than 1% of the linked records had multiple records in the ACS. For these ACS records, I kept the record with the highest PVS match score (Wagner et al. 2014; Mulrow et al. 2011). This linkage created two groups of children, which were studied in Aldana (2023):

- Children who were reported in the ACS and linked with California birth records by a PIK match. Since some children do not live with their parents, all children linked by a PIK were included, regardless of whether a parent was also linked.
- Children who were not reported in the ACS but at least one parent was linked to the ACS by PIK. These children may either have been incorrectly not reported (if they resided in their parent's ACS household), correctly not reported (if they did not reside in their ACS parent's household), or correctly reported but not assigned a PIK (and therefore, they could not be identified by a PIK).

This analysis utilized demographic and economic ACS data to characterize both reported and unreported children. First, if a child had an ACS record, the analysis utilized the responses from the child's record. Next, if only the mother was linked to an ACS record but the child was



unreported, responses from the mother's record were used, assuming children are more likely to live with their mother (Anderson et al. 2022). Lastly, if the father was linked to an ACS record but neither the mother nor child were identified, responses from the father's record were used to characterize the parent-child unit.

Next, I linked child PIKs present in both the California birth records and ACS to IRS 1040 records. Each child linked to an IRS 1040 record was considered "reported" in this analysis, regardless of whether they were reported as a filer or as a dependent. I examined whether a parent was attached to the child's IRS 1040 record. This analysis is focused on the linkage of child PIKs rather than parent PIKs in IRS 1040 records because children may be claimed as dependents by someone other than a parent. When a child had multiple IRS 1040 records, I prioritized the record that showed a child and parent on the same IRS 1040 to reflect child reporting by parents.

ACS responses were linked to IRS 1040 records for the tax year in which the response was received. Because ACS responses reflect the household on the response date while 1040 dependent claims reflect the tax year, a child born after a parent's response date but within the tax year should be reported on 1040 records and should not be reported in the ACS. Therefore, children born after a parent's response date but within the tax year are not included in this analysis. In analyzing whether ACS and IRS 1040 child reporting "agree," agreement corresponds to two scenarios:

- The child was both in a parent's ACS household and linked to a parent in the 1040 records.
- The child was neither in a parent's ACS household nor linked to a parent in the 1040 records. These children may have been correctly not reported in the ACS.

## **Limitations**

Because this analysis relies on linkage using PIKs, the results are subject to bias from non-random inability to assign PIKs. PIKs may not be assigned due to insufficient personally identifiable information (PII) in the source data or when the available PII does not uniquely match administrative records (Bond et al. 2014). Young children, racial and ethnic minority groups, immigrants, and lower-income populations are both less likely to receive a PIK and more likely to be undercounted in surveys (Johnson 2022; O’Hare et al. 2019; Fernandez et al. 2018; Jensen et al. 2018). While these factors may limit the assignment of a PIK, the birth records used in this analysis had a high PIK rate for children (98%).

Using the CHCK to augment parent PIKs is limited by bias in parent-child linkages, with Hispanic children and children from low-income and less-educated households being less likely to be linked to a parent in the CHCK (Bernard et al. 2024). Additionally, while children may have parents of the same sex in SSA records, the 2016–2019 vintage CHCK datasets limit mother and father links by sex in administrative records (Genadek et al. 2022). Therefore, if a child has two parents of the same sex, one parent may be missing from the 2016–2019 CHCK vintages.

This analysis may underestimate the number of unreported children in cases where the child did not receive a PIK in any data source and was unreported in the ACS because these children were excluded from the analysis entirely. This limitation would apply to only 2% of children in the birth records who did not receive a PIK. Furthermore, some children in this analysis who received a PIK in the birth records may be mislabeled as unreported if they were reported in their ACS household but were not assigned a PIK in the ACS data.

When using the IRS 1040 records to link to families, very low-income families will be under-represented in the IRS 1040 records because they are not required to file a 1040 form under certain income thresholds (Internal Revenue Service 2024). Akee, Jones, and Porter (2017) found that Whites and Asians are more likely to be found in 1040 records for the population ages 25 to 65 years old, possibly due to higher wages or labor participation rates than other race groups.

Additionally, the linkage between parents and children on the 1040 records is more limited when children were listed as primary or secondary filers.<sup>1</sup> This limitation applies to about 4% of children in the analysis. Eighty-one percent of children claimed as dependents had a parent attached to the same 1040. Less than one percent of children listed as primary filers and 61% of children listed as secondary filers had a parent listed on the same 1040 record.

Finally, this analysis assumes that a child should be reported in their parents' ACS household. In this analysis, children are labeled as "unreported" when at least one parent was linked to an ACS response, but the child was not linked to any ACS response. However, this characterization of a child as unreported is inaccurate if the child does not live with at least one parent and the household where the child lives was not included in the ACS sample. About 4.6% of children in California and 4.3% of children nationally lived with neither parent in 2018 (Population Reference Bureau 2019). Children who live with neither parent can vary from other children by demographic characteristics. Nationally, children who live with neither parent are more likely to be older and non-Hispanic Black or Hispanic of any race (Hemez et al. 2021). Furthermore,

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<sup>1</sup> Children may be required to file if they have any income (earned or unearned) over certain thresholds. See [Publication 929 \(2021\), Tax Rules for Children and Dependents](#) for examples.

dependent claiming in the IRS 1040 forms can differ from child reporting in surveys. While a survey response should indicate whether a child lived in a household on the date of the response, different rules for tax credits and exemptions regarding how much financial support is provided for a child and whether the child lives in that household can impact whether a filer claimed a dependent (Jones et al. 2019).

## Analysis

I began the analysis by linking children and parents from 16.6 million California birth records to the ACS by PIK. This process results in a pool of about 1.9 million families where at least one parent or the child from the birth record was reported in the ACS (Table 1). I consider a child and parent linked in the ACS if the child and at least one parent were reported in the same household. About 19% of these ACS households did not have a child-parent link. This means that either the child was reported in the ACS without either parent reported in the same ACS household or that a parent was reported in the ACS and their child was not reported in the same ACS household. Aldana (2023) examines the linkage of children from the California birth records to ACS response data in detail. Discrepancies in the following tables are due to rounding.

Table 1. Linking Children from California Birth Records to ACS Response Data

ACS parent-child linkage	Frequency	Percent
Child not linked to parent household in ACS	372,000	19.29%
Child linked to parent household in ACS	1,556,000	80.70%
Total number of children linked to ACS survey data	1,928,000	100%

Next, I linked the 1.9 million records to IRS 1040 records by PIK. As shown in Table 2, 10.79% of children were not reported in IRS 1040 records, including cases where neither the child nor either parent was found in IRS 1040 records. About 85% of children were reported as

dependents, and 3.68% were reported as primary or secondary filers. As mentioned in the Limitations section, less than one percent of children listed as a primary filer and about 61% of children listed as a secondary filer had a parent listed on the same 1040 record, so parent-child linkage within the 1040 records will be more limited for those children who were reported as primary or secondary filers.

Table 2. Linking Children to IRS Form 1040 Records

Child 1040 linkage	Frequency	Percent
Child not reported in 1040 records	208,000	10.79%
Child reported as dependent in 1040 records	1,649,000	85.53%
Child reported as filer in 1040 records	71,000	3.68%
Total	1,928,000	100%

Table 3 shows the rates of agreement for child reporting between ACS and 1040 records among children found in IRS records, excluding families where the child and both parents did not link to the IRS Form 1040 records. About 75% of the analysis population demonstrated agreement between ACS and 1040 records (meaning a child was reported in both data sources even if they are not linked to a parent or unreported in both data sources), and 25.29% of the analysis population demonstrated disagreement. These children were unreported in one of the data sources.

Table 3. Agreement Between ACS Response and IRS Form 1040 Child Reporting

ACS-1040 linkage	Frequency	Percent
ACS and 1040 child reporting agree	1,285,000	74.71%
ACS and 1040 child reporting disagree	435,000	25.29%
Total	1,720,000	100%

Among the 208,000 parent-child units where neither a parent nor child was found in the 1040 records, 59.62% of those children were reported in a parent's ACS household (Table 4). These families represent cases where ACS responses may be helpful in characterizing household

income and other traits in analyses when IRS data is unavailable. About 40% of children in families that did not appear in 1040 records also did not appear in their parent’s ACS household. While some of these children may be correctly not reported in the ACS, this large share of non-reporting for children may indicate that these families are harder to find in survey and administrative records, limiting the utility of IRS 1040 dependent reporting for survey adjustments.

Table 4. ACS Child Reporting for Families Without IRS Form 1040 Records

Child reporting in ACS	Frequency	Percent
Child not reported in parent ACS household	84,000	40.38%
Child reported in parent ACS household	124,000	59.62%
Total	208,000	100%

The Appendix contains additional tables further exploring child reporting for families with record agreement and disagreement for all children and by characteristics.

*Age*

Table 5 shows whether and how children were reported in the 1040 records by age according to the California birth records. Children in the oldest age group (15 to 17 years old) were more frequently listed as primary or secondary filers, which was expected because they may be employed. About 7% of children in this age group were listed as filers, compared to about 2-3% in younger age groups.

Table 5. Child Reporting in IRS Form 1040 Records by Child Age from California Birth Records

Child age	Child not reported in 1040 records		Child reported as dependent in 1040 records		Child reported as filer in 1040 records		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
0 to 4	50,000	10.37%	418,000	86.72%	14,500	3.01%	482,000	25.00%
5 to 9	57,500	10.67%	466,000	86.46%	15,500	2.88%	539,000	27.96%

10 to 14	61,500	10.96%	482,000	85.92%	17,500	3.12%	561,000	29.10%
15 to 17	38,500	11.13%	283,000	81.79%	24,000	6.94%	346,000	17.95%
Total	208,000		1,649,000		71,000		1,928,000	
	10.79%		85.53%		3.68%		100%	

Table 6 shows child reporting agreement between the ACS and 1040 records by age according to the California birth records. The rates of disagreement between ACS and IRS child reporting increased from 21.71% for the youngest age group to 33.55% for the oldest age group. This disagreement may be due to older children being reported as 1040 filers and because children who live with neither parent are more likely to be older (Anderson et al. 2022).

Table 6. Agreement Between ACS and IRS Child Reporting by Child Age from California Birth Records

Child age	ACS and 1040 child reporting agree		ACS and 1040 child reporting disagree		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
0 to 4	339,000	78.29%	94,000	21.71%	433,000	25.16%
5 to 9	372,000	77.18%	110,000	22.82%	482,000	28.01%
10 to 14	369,000	73.95%	130,000	26.05%	499,000	28.99%
15 to 17	204,000	66.45%	103,000	33.55%	307,000	17.84%
Total	1,284,000		437,000		1,721,000	
	74.61%		25.39%		100%	

### *Mother's Birthplace*

The California birth records indicate whether a mother was born in the United States or another country. Table 7 characterizes child reporting by their mother's birthplace, which show similar reporting rates. Children of US-born mothers were reported in 1040 records 89.98% of the time, and children of foreign-born mothers were reported in 1040 records about 88.07% of the time.

Table 7. Child Reporting in 1040 Records by Mother's Birthplace from California Birth Records

Mother's birthplace	Child not reported in 1040 records	Child reported as dependent in 1040 records	Child reported as filer in 1040 records	Total
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	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	200	12.50%	1,400	87.50%	50	3.13%	1,600	0.01%
US-born	114,000	10.02%	981,000	86.20%	43,000	3.78%	1,138,000	59.02%
Foreign-born	93,500	11.87%	666,000	84.52%	28,000	3.55%	788,000	40.87%
Total	208,000		1,649,000		71,000		1,928,000	
	10.79%		85.53%		3.683%		100%	

Table 8 shows child reporting agreement between the ACS and 1040 records by the mother's birthplace according to the California birth records. Children of foreign-born mothers had less frequent agreement between ACS and IRS reporting. The ACS and 1040 records for these families agreed in 70.61% of cases, compared to 77.52% in families with US-born mothers and 80.00% for families missing the mother's birthplace data.

Table 8. Agreement Between ACS and IRS Child Reporting by Mother's Birthplace from California Birth Records

Mother's birthplace	ACS and 1040 child reporting agree		ACS and 1040 child reporting disagree		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	1,200	80.00%	300	20.00%	1,500	0.09%
US-Born	793,000	77.52%	230,000	22.48%	1,023,000	59.55%
Foreign-Born	490,000	70.61%	204,000	29.39%	694,000	40.40%
Total	1,284,000		434,000		1,718,000	
	74.74%		25.26%		100%	

### *Mother's Race and Hispanic Ethnicity*

Mother's race and Hispanic ethnicity from the California birth records were used to characterize child reporting in Table 9. Child non-reporting in 1040 records varied from a low of 7.21% for children of Non-Hispanic Asian mothers to a high of 13.76% for children of Non-Hispanic Black mothers. Moreover, children of Non-Hispanic Black mothers were reported as primary or



secondary filers at a higher rate. About 7% of children of Non-Hispanic Black mothers were reported as a filer compared to 2-4% for other race and ethnicity groups.

Table 9. Child Reporting in 1040 Records by Mother's Race and Hispanic Ethnicity from California Birth Records

Mother's race and Hispanic ethnicity	Child not reported in 1040 records		Child reported as dependent in 1040 records		Child reported as filer in 1040 records		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	2,000	10.00%	17,500	87.50%	400	2.00%	20,000	1.04%
Non-Hispanic White	61,500	9.22%	582,000	87.26%	23,500	3.52%	667,000	34.61%
Non-Hispanic Asian	16,000	7.21%	201,000	90.54%	5,300	2.39%	222,000	11.52%
Non-Hispanic Black	13,000	13.76%	75,500	79.89%	6,200	6.56%	94,500	4.90%
Non-Hispanic Other Race	5,300	12.77%	35,000	84.34%	1,300	3.13%	41,500	2.15%
Hispanic, any race	109,000	12.36%	738,000	83.67%	34,500	3.91%	882,000	45.77%
Total	207,000		1,649,000		71,000		1,927,000	
	10.74%		85.57%		3.684%		100%	

Table 10 shows child reporting agreement between ACS and 1040 records by the mother's race and Hispanic ethnicity from the California birth records. Agreement between ACS and 1040 records was lowest for children of Non-Hispanic Black mothers at 65.03%, followed by children of Hispanic mothers (any race) at 73.97%, compared to 84.47% for children of Non-Hispanic Asian mothers, which had the highest rate of agreement.

Table 10. Agreement Between ACS and IRS Child Reporting by Mother's Race and Hispanic Ethnicity from California Birth Records

Mother's race and Hispanic ethnicity	ACS and 1040 child reporting agree		ACS and 1040 child reporting disagree		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	14,500	80.56%	3,300	18.33%	18,000	1.05%
Non-Hispanic White	499,000	82.48%	106,000	17.52%	605,000	35.19%
Non-Hispanic Asian	174,000	84.47%	32,500	15.78%	206,000	11.98%
Non-Hispanic Black	53,000	65.03%	28,500	34.97%	81,500	4.74%
Non-Hispanic Other Race	27,000	73.97%	9,300	25.48%	36,500	2.12%
Hispanic, any race	517,000	66.97%	255,000	33.03%	772,000	44.91%
Total	1,284,000		435,000		1,719,000	
	74.69%		25.31%		100%	

*Ease of Speaking English*

The ACS questionnaire asks whether each person in the household speaks a language other than English at home, what language they speak, and how well they speak English (U.S. Census Bureau, n.d.). How well a person speaks English can be answered with the following options: very well, well, not well, or not at all. The 2019 ACS estimated that 44.5% of people in California five years old and older spoke a language other than English at home (Dietrich et al. 2022). In this analysis, when a child under five was reported in the ACS, ease of speaking English data was taken from a parent’s ACS response if possible. Table 11 shows whether and how children were reported in the IRS 1040 records by ease of speaking English from the ACS response data. Children were less commonly reported in the 1040s as English proficiency decreased according to ACS responses. About 18% percent of children in the “not at all”

category were not reported in IRS 1040 records, compared to 10.13% for children in the “very well” category.

Table 11. Child Reporting in IRS 1040 Records by Ease of Speaking English from ACS Response Data

Ease of speaking English	Child not reported in 1040 records		Child reported as dependent in 1040 records		Child reported as filer in 1040 records		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	5,600	17.78%	24,000	76.19%	1,700	5.40%	31,500	1.63%
Very well	167,000	10.13%	1,420,000	86.17%	60,500	3.67%	1,648,000	85.43%
Well	17,500	12.32%	119,000	83.80%	5,200	3.66%	142,000	7.36%
Not well	12,000	15.19%	64,000	81.01%	2,800	3.54%	79,000	4.10%
Not at all	5,200	17.63%	23,000	77.97%	1,200	4.07%	29,500	1.53%
Total	207,000		1,650,000		71,500		1,929,000	
	10.73%		85.54%		3.71%		100%	

Table 12 shows child reporting agreement between the ACS and IRS 1040 records by ease of speaking English from the ACS response data. Agreement between ACS and IRS 1040 child reporting decreased as the ease of speaking English decreased. Child reporting in the ACS and 1040 records agreed at a maximum rate of 76.96% for those who spoke English “very well” and decreased by 23.71 percentage points to 56.25% for those who did not speak English at all.

Table 12. Agreement Between ACS and IRS 1040 Child Reporting by Ease of Speaking English from ACS Response Data

Ease of speaking English	ACS and 1040 child reporting agree		ACS and 1040 child reporting disagree		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	6,400	25.10%	19,000	74.51%	25,500	1.48%
Very well	1,139,000	76.96%	341,000	23.04%	1,480,000	86.05%
Well	83,500	67.34%	40,500	32.66%	124,000	7.21%
Not well	42,500	63.91%	24,000	36.09%	66,500	3.87%
Not at all	13,500	56.25%	10,500	43.75%	24,000	1.40%
Total	1,285,000		435,000		1,720,000	
	74.71%		25.29%		100%	

While I previously found trends in ACS child reporting when combining stratification by the ease of speaking English and the mother’s race and Hispanic ethnicity (Aldana 2023), I was unable to complete a similar analysis in this paper using IRS 1040 records due to low population sizes in subgroups.

*Mother’s Education Level*

I used the mothers’ reported high school completion from the California birth records to characterize child reporting in Table 13. About 15% percent of children of mothers who did not complete high school were not found in IRS 1040 records, compared to 9.09% for children of mothers who reported high school completion.

Table 13. Child Reporting in IRS 1040 Records by Mother's Education Level from California Birth Records

Mother's education level	Child not reported in 1040 records		Child reported as dependent in 1040 records		Child reported as filer in 1040 records		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	6,000	11.43%	43,500	82.86%	3,000	5.71%	52,500	2.72%
Less than high school	75,500	15.41%	391,000	79.80%	23,500	4.80%	490,000	25.41%
High school completion	126,000	9.09%	1,215,000	87.66%	44,500	3.21%	1,386,000	71.89%
Total	208,000		1,650,000		71,000		1,928,000	
	10.79%		85.58%		3.68%		100%	

Table 14 shows child reporting agreement between the ACS and IRS 1040 records by the mother's education level according to the California birth records. Only 59.76% of children whose mothers indicated less than high school completion were reported in both a parent's ACS household and a parent's IRS 1040, compared to 80.24% of those whose mothers completed high school.

Table 14. Agreement Between ACS and IRS 1040 Child Reporting by Mother's Education Level from California Birth Records

	ACS and 1040 child reporting agree		ACS and 1040 child reporting disagree		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	26,500	56.99%	20,000	43.01%	46,500	2.70%
Less than high school	248,000	59.76%	167,000	40.24%	415,000	24.10%
High school completion	1,011,000	80.24%	249,000	19.76%	1,260,000	73.17%
Total	1,286,000		436,000		1,722,000	
	74.68%		25.32%		100%	

*Presence of Subfamilies*

Table 15 shows whether and how children were reported in IRS 1040 records by the presence of subfamilies in the household from the ACS response data. A subfamily is defined as "a married couple with or without never-married children under 18 years old, or one parent with one or more never-married children under 18 years old ... in a household where the householder or householder's spouse is a relative" (U.S. Census Bureau 2019, 81). There were no large differences in child reporting in IRS 1040 records by the presence of subfamilies for families with data, as shown in Table 15. However, 23% of children in households who were missing this response were not reported in the 1040 records, compared to 10-12% for children in households with response data.

Table 15. Child Reporting in 1040 Records by Presence of Subfamilies from ACS Response Data

	Child not reported in 1040 records		Child reported as dependent in 1040 records		Child reported as filer in 1040 records		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	8,900	23.12%	28,000	72.73%	1,500	3.90%	38,500	2.00%
No subfamilies in household	172,000	10.37%	1,427,000	86.07%	59,500	3.59%	1,658,000	86.09%
Subfamilies in household	26,500	11.52%	194,000	84.35%	10,000	4.35%	230,000	11.94%
Total	207,000		1,649,000		71,000		1,926,000	
	10.75%		85.62%		3.69%		100%	

Table 16 shows child reporting agreement between ACS and 1040 records by the presence of subfamilies in the household from the ACS response data. ACS and 1040 child reporting agreed for 76.24% of children in households without subfamilies, compared to 67.80% for children with subfamilies in the household. Lower agreement in ACS and 1040 child reporting may reflect

prior findings that households with subfamilies may be less likely to enumerate children (Griffin et al. 2020).

Table 16. Agreement Between ACS and IRS Child Reporting by Presence of Subfamilies from ACS Response Data

Presence of subfamilies	ACS and 1040 child reporting agree		ACS and 1040 child reporting disagree		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	13,500	45.76%	16,000	54.24%	29,500	1.72%
No subfamilies in household	1,133,000	76.24%	353,000	23.76%	1,486,000	86.40%
Subfamilies in household	139,000	67.80%	66,000	32.20%	205,000	11.92%
Total	1,286,000		435,000		1,720,000	
	74.77%		25.29%		100%	

*Presence of Non-Related Persons*

Table 17 shows whether and how children were reported in the 1040 records by the presence of non-related persons in the household from the ACS response data. A non-related person is defined as "any household member, including foster children, not related to the householder by birth, marriage, or adoption" (U.S. Census Bureau 2019, 80). This definition includes individuals such as roommates and unmarried partners. Twenty-three percent of children in households who were missing this response were not reported in the 1040 records, compared to 10-13% for children in households with response data. About 81% of children in households with non-related persons were reported as dependents, and 5.77% were reported as filers in 1040 records, compared to 86.67% and 3.90%, respectively, for children in households without non-related persons.

Table 17. Child Reporting in 1040 Records by Presence of Non-Related Persons from ACS Response Data

Presence of non-related persons	Child not reported in 1040 records		Child reported as dependent in 1040 records		Child reported as filer in 1040 records		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	8,900	23.12%	28,000	72.73%	1,500	3.90%	38,500	2.00%
No non-related persons in household	163,000	10.01%	1,411,000	86.67%	54,500	3.35%	1,628,000	84.48%
Non-related persons in household	35,000	13.46%	210,000	80.77%	15,000	5.77%	260,000	13.49%
Total	207,000		1,649,000		71,000		1,927,000	
	10.74%		85.57%		3.68%		100%	

Table 18 shows child reporting agreement in the ACS and 1040 records by the presence of non-related persons in the household from the ACS response data. Child reporting in the ACS and 1040 records agreed for 77.15% of households without non-related persons, compared to only 62.67% for households with non-related persons.

Table 18. Agreement Between ACS and IRS Child Reporting by Presence of Non-Related Persons from ACS Response Data

	ACS and 1040 child reporting agree		ACS and 1040 child reporting disagree		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	13,500	45.76%	16,000	54.24%	29,500	1.72%
No non-related persons in household	1,131,000	77.15%	335,000	22.85%	1,466,000	85.23%
Non-related persons in household	141,000	62.67%	84,000	37.33%	225,000	13.08%
Total	1,286,000		435,000		1,720,000	
	74.77%		25.29%		100%	

*ACS Data Collection Mode*



Households sampled in the ACS have about two months to self-respond by internet or mail.

Households who do not self-respond are subject to non-response follow-up operations through a computer-assisted telephone interview (CATI) or computer-assisted personal interview (CAPI) (Rothbaum et al. 2021).<sup>2</sup>

Table 19 shows child reporting in IRS 1040 records by ACS data collection mode. Children were least frequently reported on IRS 1040s when ACS responses resulted from a group quarters personal visit, with about 23% of these children not being reported on a parent's IRS 1040 record. Child reporting on IRS 1040s was highest for ACS households who responded by mail and internet, reporting children as dependents 86.00% and 91.20% of the time, respectively. These results may indicate that IRS 1040 records may be more helpful for supplementing child-parent linkages for some data collection modes than others.

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<sup>2</sup> The ACS ceased Nonresponse Follow Up through computer-assisted telephone interview after September 2017 (U.S. Census Bureau 2017).

Table 19. Child Reporting in 1040 Records by ACS Data Collection Mode

ACS data collection mode	Child not reported in 1040 records		Child reported as dependent in 1040 records		Child reported as filer in 1040 records		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Internet	35,500	8.22%	394,000	91.20%	2,800	0.65%	432,000	22.42%
Mail	67,000	9.57%	602,000	86.00%	31,500	4.50%	700,000	36.33%
Computer-assisted telephone interview (CATI)	21,500	11.44%	156,000	82.98%	11,000	5.85%	188,000	9.76%
Computer-assisted personal interview (CAPI)	74,500	13.12%	469,000	82.57%	24,000	4.23%	568,000	29.48%
Group quarters personal visit	8,900	23.12%	28,000	72.73%	1,500	3.90%	38,500	2.00%
Total	207,000		1,649,000		71,000		1,927,000	
	10.74%		85.57%		3.68%		100%	

Table 20 shows child reporting agreement between the ACS and 1040 records by ACS data collection mode. Agreement between ACS and IRS 1040 child reporting was highest for internet ACS responses, with 85.86% of these records agreeing, followed by mail responses at 78.99%. Disagreement in child reporting was highest for responses by group quarter personal visit at 54.24%, followed by CAPI responses at 35.63%.

Table 20. Agreement Between ACS and IRS Child Reporting by ACS Data Collection Mode

ACS data collection mode	ACS and 1040 child reporting agree		ACS and 1040 child reporting disagree		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Internet	340,000	85.86%	56,000	14.14%	396,000	23.02%
Mail	500,000	78.99%	133,000	21.01%	633,000	36.80%
Computer assisted telephone interview (CATI)	113,000	67.66%	54,000	32.34%	167,000	9.71%
Computer assisted personal interview (CAPI)	318,000	64.37%	176,000	35.63%	494,000	28.72%
Group quarters personal visit	13,500	45.76%	16,000	54.24%	29,500	1.72%
Total	1,284,000		435,000		1,720,000	
	74.65%		25.29%		100%	

*Ratio of Household Income to Poverty Threshold*

Poverty thresholds are dollar amounts that are used to define whether a family is in poverty, varying by the size of the family and the age of the individuals in the family. The ratio of income to the poverty threshold is the family’s total income divided by the poverty threshold for that family’s characteristics (U.S. Census Bureau 2023). In this analysis, I use the ratio of household income to the poverty threshold, rather than simply poverty status, to show how child reporting varies over several income levels while accounting for household size.

Table 21 and Table 22 stratify based on the poverty index developed from ACS income responses. Children were not found in the IRS 1040 records at the highest rate for ACS records

missing income data (22.53%), followed by households with income up to 100% of the poverty threshold (17.11%) in Table 21. Children were not found in the IRS 1040 records at the lowest rate (7.65%) in households with an income of at least 401% of the poverty threshold.

Table 21. Child Reporting in 1040 Records by Ratio of Household Income to Poverty Threshold from ACS Income Response Data

Ratio of household income to poverty threshold	Child not reported in 1040 records		Child reported as dependent in 1040 records		Child reported as filer in 1040 records		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	8,900	22.53%	29,000	73.42%	1,600	4.05%	39,500	2.05%
Up to 100% of poverty threshold	57,500	17.11%	263,000	78.27%	15,000	4.46%	336,000	17.43%
101-200% of poverty threshold	44,500	10.83%	349,000	84.91%	17,500	4.26%	411,000	21.32%
201-300% of poverty threshold	30,000	9.55%	271,000	86.31%	13,000	4.14%	314,000	16.29%
301-400% of poverty threshold	20,500	9.03%	198,000	87.22%	8,300	3.66%	227,000	11.77%
401% of poverty threshold and above	46,000	7.65%	539,000	89.68%	16,000	2.66%	601,000	31.17%
Total	207,000		1,649,000		71,500		1,928,000	
	10.74%		85.53%		3.71%		100%	

Table 22 shows child reporting agreement between the ACS and IRS 1040 records by the ratio of household income to the poverty threshold. Agreement in child reporting between ACS responses and IRS 1040 records steadily increased as income as a percentage of the poverty threshold increased, from 61.15% for households with income up to 100% of the poverty threshold to 84.30% for households with income of at least 401% of the poverty threshold.

Table 22. Agreement Between ACS and IRS Child Reporting by Ratio of Household Income to Poverty Threshold from ACS Income Response Data

Ratio of household income to poverty threshold	ACS and 1040 child reporting agree		ACS and 1040 child reporting disagree		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	12,500	40.98%	18,000	59.02%	30,500	1.77%
Up to 100% of poverty threshold	170,000	61.15%	108,000	38.85%	278,000	16.16%
101-200% of poverty threshold	257,000	70.03%	110,000	29.97%	367,000	21.34%
201-300% of poverty threshold	214,000	75.35%	69,500	24.47%	284,000	16.51%
301-400% of poverty threshold	164,000	79.61%	42,500	20.63%	206,000	11.98%
401% of poverty threshold and above	467,000	84.30%	87,500	15.79%	554,000	32.21%
Total	1,284,000		436,000		1,720,000	
	74.65%		25.35%		100%	

## Conclusion

This paper leverages administrative records from California, a state with a large child population and a historically significant undercount of children in Census Bureau data, alongside IRS records and the ACS, to analyze and compare child reporting discrepancies. Young children are a historically undercounted population of continuing concern to the Census Bureau (Jensen 2022). Due to the use of Census Bureau data to allocate funding for federal, state, and local programs, undercounting children in surveys could affect funding for programs for children, such as Head Start and the Special Supplemental Program for Women, Infants, and Children (WIC) (O’Hare et al. 2016). Additionally, undercounting children could lead to biased estimates if these children

differ from enumerated children, as prior research and the results of this analysis suggest (Fernandez et al. 2018).

While IRS 1040 records may have some utility in adjusting for child undercounting in Census Bureau surveys, the comparisons in this analysis show that the ACS and IRS 1040 records have some overlapping reporting issues for demographic and economic groups of concern. Older children, those with non-Hispanic Black and Hispanic mothers, children or parents with lower English proficiency, children whose mothers did not complete high school, and families with a lower ratio of household income to the poverty threshold were less frequently reported in IRS 1040 records. As such, using IRS 1040 dependent records for these populations, whose characteristics are associated with the undercount of children in surveys, may be limited, and further research is warranted for the population of children not linked to 1040 records.

Given the limitations of this analysis, there is ample room to continue research in this area. Future research could quantify the statistical significance of factors associated with undercounting in ACS and IRS records further. Additionally, this analysis did not include some factors associated with undercounting, such as type of housing unit, household size, parental marriage status, and community-level characteristics.

The use of additional data sources could also enhance research efforts for the undercount of children. Similar analyses could be completed using birth records from other states with known large undercounts, such as Texas, and with other Census Bureau data, such as the Decennial Census. There are also opportunities to expand on this analysis using other rich administrative records such as Supplemental Nutrition Assistance Program data and the IRS tax form 1095, which reports health insurance coverage. As these administrative records may still have notable

undercounts of children, particularly younger children, research comparing survey and administrative records can benefit the Census Bureau and other agencies.

## Appendix

Table A1. Child Reporting for Families with Record Agreement

ACS-1040 child reporting	Frequency	Percent
Child reported in parent ACS and 1040 households	1,186,000	92.37%
Child not reported in parent ACS and 1040 households	98,000	7.63%
Total	1,284,000	100%

Table A2. Child Reporting for Families with Record Disagreement

ACS-1040 child reporting	Frequency	Percent
Child reported in parent ACS household but not reported on parent 1040	246,000	56.55%
Child reported on parent 1040 but not reported in parent ACS household	189,000	43.45%
Total	435,000	100%

Table A3. Child Reporting for Families with Record Agreement by Child Age from California Birth Records

Child age	Child reported in parent ACS and 1040 households		Child not reported in parent ACS and 1040 households		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
0 to 4	316,000	93.22%	23,000	6.79%	339,000	26.40%
5 to 9	345,000	92.74%	27,500	7.39%	372,000	28.97%
10 to 14	340,000	92.14%	29,000	7.86%	369,000	28.74%
15 to 17	185,000	90.69%	19,000	9.31%	204,000	15.89%
Total	1,186,000		98,500		1,284,000	
	92.37%		7.67%		100%	

Table A4. Child Reporting for Families with Record Disagreement by Child Age from California Birth Records

Child age	Child reported in parent ACS household but not reported on parent 1040		Child reported on parent 1040 but not reported in parent ACS household		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
0 to 4	37,000	39.36%	57,000	60.64%	94,000	21.56%
5 to 9	50,000	45.45%	59,500	54.09%	110,000	25.23%
10 to 14	80,000	61.54%	50,000	38.46%	130,000	29.82%
15 to 17	79,500	77.18%	23,500	22.82%	103,000	23.62%
Total	246,000		190,000		436,000	
	56.42%		43.58%		100%	



Table A5. Child Reporting for Families with Record Agreement by Mother's Birthplace from California Birth Records

Mother's birthplace	Child reported in parent ACS and 1040 households		Child not reported in parent ACS and 1040 households		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	1,100	91.67%	60	5.00%	1,200	0.09%
US-born	751,000	94.70%	42,000	5.30%	793,000	61.71%
Foreign-born	434,000	88.57%	56,000	11.43%	490,000	38.13%
Total	1,186,000		98,000		1,285,000	
	92.30%		7.63%		100%	

Table A6. Child Reporting for Families with Record Disagreement by Mother's Birthplace from California Birth Records

Mother's birthplace	Child reported in parent ACS household but not reported on parent 1040		Child reported on parent 1040 but not reported in parent ACS household		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	150	50.00%	150	50.00%	300	0.07%
US-born	111,000	48.05%	119,000	51.52%	231,000	53.10%
Foreign-born	134,000	65.69%	70,000	34.31%	204,000	46.90%
Total	246,000		189,000		435,000	
	56.55%		43.45%		100%	

Table A7. Child Reporting for Families with Record Agreement by Mother's Race and Hispanic Ethnicity from California Birth Records

Mother's race and Hispanic ethnicity	Child reported in parent ACS and 1040 households		Child not reported in parent ACS and 1040 households		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	14,000	96.55%	550	3.79%	14,500	1.13%
Non-Hispanic White	483,000	96.79%	16,000	3.21%	499,000	38.83%
Non-Hispanic Asian	171,000	98.28%	2,900	1.67%	174,000	13.54%
Non-Hispanic Black	46,500	87.74%	6,700	12.64%	53,000	4.13%
Non-Hispanic Other Race	25,000	92.59%	2,000	7.41%	27,000	2.10%
Hispanic, any race	447,000	86.46%	70,000	13.54%	517,000	40.23%
Total	1,186,000		98,000		1,285,000	
	92.30%		7.63%		100%	

Table A8. Child Reporting for Families with Record Disagreement by Mother's Race and Hispanic Ethnicity from California Birth Records

Mother's race and Hispanic ethnicity	Child reported in parent ACS household but not reported on parent 1040		Child reported on parent 1040 but not reported in parent ACS household		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	1,200	36.36%	2,100	63.64%	3,300	0.76%
Non-Hispanic White	56,500	53.30%	50,000	47.17%	106,000	24.37%
Non-Hispanic Asian	15,500	47.69%	17,000	52.31%	32,500	7.47%
Non-Hispanic Black	16,500	57.89%	12,000	42.11%	28,500	6.55%
Non-Hispanic Other Race	4,300	46.24%	5,000	53.76%	9,300	2.14%
Hispanic, any race	152,000	59.61%	103,000	40.39%	255,000	58.62%
Total	246,000		189,000		435,000	
	56.55%		43.45%		100%	

Table A9. Child Reporting for Families with Record Agreement by Ease of Speaking English from ACS Response Data

Ease of speaking English	Child reported in parent ACS and 1040 households		Child not reported in parent ACS and 1040 households		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	6,300	98.44%	100	1.56%	6,400	0.50%
Very well	1,069,000	93.85%	70,000	6.15%	1,139,000	88.64%
Well	72,000	86.75%	11,000	13.25%	83,000	6.46%
Not well	31,500	73.26%	11,500	26.74%	43,000	3.35%
Not at all	7,700	57.04%	5,700	42.22%	13,500	1.05%
Total	1,186,000		98,500		1,285,000	
	92.30%		7.67%		100%	

Table A10. Child Reporting for Families with Record Disagreement by Ease of Speaking English from ACS Response Data

Ease of speaking English	Child reported in parent ACS household but not reported on parent 1040		Child reported on parent 1040 but not reported in parent ACS household		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	19,000	100%	200	1.05%	19,000	4.36%
Very well	198,000	58.06%	143,000	41.94%	341,000	78.21%
Well	20,500	50.62%	20,000	49.38%	40,500	9.29%
Not well	6,400	26.12%	18,000	73.47%	24,500	5.62%
Not at all	1,800	17.14%	8,800	83.81%	10,500	2.41%
Total	246,000		190,000		436,000	
	56.42%		43.58%		100%	

Table A11. Child Reporting for Families with Record Agreement by Mother's Education from California Birth Records

Mother's education level	Child reported in parent ACS and 1040 households		Child not reported in parent ACS and 1040 households		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	24,500	92.45%	2,200	8.30%	26,500	2.06%
Less than high school	191,000	77.33%	56,000	22.67%	247,000	19.22%
High school completion	971,000	96.04%	40,000	3.96%	1,011,000	78.68%
Total	1,186,000		98,000		1,285,000	
	92.30%		7.63%		100%	

Table A12. Child Reporting for Families with Record Disagreement by Mother's Education from California Birth Records

Mother's education level	Child reported in parent ACS household but not reported on parent 1040		Child reported on parent 1040 but not reported in parent ACS household		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	15,500	77.50%	4,500	22.50%	20,000	4.61%
Less than high school	117,000	70.48%	49,500	29.82%	166,000	38.25%
High school completion	113,000	45.56%	135,000	54.44%	248,000	57.14%
Total	246,000		189,000		434,000	
	56.68%		43.55%		100%	

Table A13. Child Reporting for Families with Record Agreement by Presence of Subfamilies from ACS Response Data

Presence of subfamilies	Child reported in parent ACS and 1040 households		Child not reported in parent ACS and 1040 households		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	1,500	11.11%	12,000	88.89%	13,500	1.05%
No subfamilies in household	1,059,000	93.47%	74,000	6.53%	1,133,000	88.10%
Subfamilies in household	126,000	90.65%	12,500	8.99%	139,000	10.81%
Total	1,186,000		98,500		1,286,000	
	92.22%		7.66%		100%	

Table A14. Child Reporting for Families with Record Disagreement by Presence of Subfamilies from ACS Response Data

Presence of subfamilies	Child reported in parent ACS household but not reported on parent 1040		Child reported on parent 1040 but not reported in parent ACS household		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	1,100	6.88%	15,000	93.75%	16,000	3.68%
No subfamilies in household	201,000	56.94%	152,000	43.06%	353,000	81.15%
Subfamilies in household	43,500	65.91%	22,000	33.33%	66,000	15.17%
Total	246,000		189,000		435,000	
	56.55%		43.45%		100%	

Table A15. Child Reporting for Families with Record Agreement by Presence of Non-Related Persons from ACS Response Data

Presence of subfamilies	Child reported in parent ACS and 1040 households		Child not reported in parent ACS and 1040 households		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	1,500	11.11%	12,000	88.89%	13,500	1.05%
No non-related persons in household	1,063,000	93.99%	68,000	6.01%	1,131,000	88.02%
Non-related persons in household	122,000	87.14%	18,500	13.21%	140,000	10.89%
Total	1,186,000		98,500		1,285,000	
	92.30%		7.67%		100%	

Table A16. Child Reporting for Families with Record Disagreement by Presence of Non-Related Persons from ACS Response Data

Presence of non-related persons	Child reported in parent ACS household but not reported on parent 1040		Child reported on parent 1040 but not reported in parent ACS household		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	1,100	6.88%	15,000	93.75%	16,000	3.68%
No non-related persons in household	198,000	59.10%	137,000	40.90%	335,000	77.01%
Non-related persons in household	46,500	55.69%	37,000	44.31%	83,500	19.20%
Total	246,000		189,000		435,000	
	56.55%		43.45%		100%	

Table A17. Child Reporting for Families with Record Agreement by ACS Data Collection Mode

ACS data collection mode	Child reported in parent ACS and 1040 households		Child not reported in parent ACS and 1040 households		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Mail	472,000	94.40%	28,000	5.60%	500,000	38.94%
Computer assisted telephone interview (CATI)	103,000	91.15%	10,000	2.00%	113,000	8.80%
Computer assisted personal interview (CAPI)	281,000	88.64%	36,000	7.20%	317,000	24.69%
Group quarters personal visit	1,500	11.11%	12,000	2.40%	13,500	1.05%
Internet	328,000	96.47%	12,000	2.40%	340,000	26.48%
Total	1,186,000		98,000		1,284,000	
	92.37%		7.63%		100%	

Table A18. Child Reporting for Families with Record Disagreement by ACS Data Collection Mode

ACS data collection mode	Child reported in parent ACS household but not reported on parent 1040		Child reported on parent 1040 but not reported in parent ACS household		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Mail	88,500	66.04%	45,000	33.58%	134,000	30.73%
Computer assisted telephone interview (CATI)	37,500	69.44%	16,500	30.56%	54,000	12.39%
Computer assisted personal interview (CAPI)	97,500	55.40%	78,500	44.60%	176,000	40.37%
Group quarters personal visit	1,200	7.50%	15,000	93.75%	16,000	3.67%
Internet	21,500	38.39%	34,500	61.61%	56,000	12.84%
Total	246,000		190,000		436,000	
	56.42%		43.58%		100%	



Table A19. Child Reporting for Families with Record Agreement by Ratio of Household Income to Poverty Threshold ACS Income Response Data

Ratio of household income to poverty threshold	Child reported in parent ACS and 1040 households		Child not reported in parent ACS and 1040 households		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	2,300	17.69%	10,500	80.77%	13,000	1.01%
Up to 100% of poverty threshold	146,000	85.88%	23,500	13.82%	170,000	13.23%
101-200% of poverty threshold	234,000	91.05%	23,000	8.95%	257,000	20.00%
201-300% of poverty threshold	198,000	92.52%	16,500	7.71%	214,000	16.65%
301-400% of poverty threshold	154,000	93.90%	9,800	5.98%	164,000	12.76%
401% of poverty threshold and above	452,000	96.58%	15,500	3.31%	468,000	36.42%
Total	1,186,000		99,000		1,285,000	
	92.30%		7.70%		100%	

Table A20. Child Reporting for Families with Record Disagreement by Ratio of Household Income to Poverty Threshold from ACS Income Response Data

Ratio of household income to poverty threshold	Child reported in parent ACS household but not reported on parent 1040		Child reported on parent 1040 but not reported in parent ACS household		Total	
	Freq.	Percent of group	Freq.	Percent of group	Freq.	Percent of total
Missing data	4,900	27.22%	13,000	72.22%	18,000	4.14%
Up to 100% of poverty threshold	74,500	68.98%	33,000	30.56%	108,000	24.83%
101-200% of poverty threshold	71,000	64.55%	39,000	35.45%	110,000	25.29%
201-300% of poverty threshold	38,000	54.29%	32,000	45.71%	70,000	16.09%
301-400% of poverty threshold	20,500	48.24%	22,000	51.76%	42,500	9.77%
401% of poverty threshold and above	37,500	42.86%	50,000	57.14%	87,500	20.11%
Total	246,000		189,000		435,000	
	56.55%		43.45%		100%	

## References

- Akee, Randall, Maggie R. Jones, and Sonya R. Porter. 2017. "Adding Insult to Injury: Racial Disparity in an Era of Increasing Income Inequality." CARRA 2017-01. U.S. Census Bureau. <https://www.census.gov/library/working-papers/2017/adrm/carra-wp-2017-01.html>.
- Aldana, Gloria G. 2022. "Comparison of California Birth Records and Census Household Composition Key." 22–13. CES Technical Notes Series. U.S. Census Bureau. <https://ideas.repec.org/p/cen/tnotes/22-13.html>.
- Aldana, Gloria G. 2023. "Coverage of Children in the American Community Survey Based on California Birth Records." CES 23-46. U.S. Census Bureau. <https://www.census.gov/library/working-papers/2023/adrm/CES-WP-23-46.html>.
- Anderson, Lydia, Paul Hemez, and Rose Kreider. 2022. "Living Arrangements of Children: 2019." P70-174. U.S. Census Bureau. <https://www.census.gov/library/publications/2022/demo/p70-174.html>.
- Bee, Adam, and Jonathan Rothbaum. 2019. "The Administrative Income Statistics (AIS) Project: Research on the Use of Administrative Records to Improve Income and Resource Estimates." SEHSD 2019-36. U.S. Census Bureau. <https://www.census.gov/library/working-papers/2019/demo/SEHSD-WP2019-36.html>.
- Bernard, Jennifer, Kelsey Drotning, and Katie Genadek. 2024. "Where Are Your Parents? Exploring Potential Bias in Administrative Records on Children." CES 24-18. U.S. Census Bureau. <https://www.census.gov/library/working-papers/2024/adrm/CES-WP-24-18.html>.
- Bond, Brittany, J. David Brown, Adela Luque, and Amy O'Hara. 2014. "The Nature of the Bias When Studying Only Linkable Person Records: Evidence from the American Community Survey." CARRA 2014-08. U.S. Census Bureau. <https://www.census.gov/library/working-papers/2014/adrm/carra-wp-2014-08.html>.
- Brady, Peter J, and Steven Bass. 2021. "Comparing the Current Population Survey to Income Tax Data." *Social Science Research Network 4025470*, March. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4025470](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4025470).
- Brown, David J., Samuel R. Cohen, Genevieve Denoeux, Suzanne Dorinski, Misty L. Heggeness, Carl Lieberman, Linden McBride, et al. 2023. "Real-Time 2020 Administrative Record Census Simulation." U.S. Census Bureau. May 5, 2023. <https://www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/evaluate/eae/2020-admin-record-census-simulation.html>.
- Dietrich, Sandy, and Erik Hernandez. 2022. "Language Use in the United States: 2019." ACS-50. American Community Survey Reports. U.S. Census Bureau. <https://www.census.gov/library/publications/2022/acs/acs-50.html>.
- Fernandez, Leticia, Rachel Shattuck, and James Noon. 2018. "The Use of Administrative Records and the American Community Survey to Study the Characteristics of Undercounted Young Children in the 2010 Census." CARRA 2018-05. <https://www.census.gov/library/working-papers/2018/adrm/carra-wp-2018-05.html>.
- Finlay, Keith, and Katie Genadek. 2021. "Measuring All-Cause Mortality with the Census Numident File." *American Journal of Public Health* 111 (S2): S141–48.
- Foster, Thomas B., Mark Ellis, and Lee Fiorio. 2018. "The Opportunities and Challenges of Linked IRS Administrative and Census Survey Records in the Study of Migration."

- CARRA 2018-06. U.S. Census Bureau. <https://www.census.gov/library/working-papers/2018/adrm/carra-wp-2018-06.html>.
- Genadek, Katie, Joshua Sanders, and Amanda Stevenson. 2022. "Measuring US Fertility Using Administrative Data from the Census Bureau." *Demographic Research* 47:37.
- Griffin, Deborah H., and William P. O'Hare. 2020. "Are Census Omissions of Young Children Due to Respondent Misconceptions about the Census?" *International Journal of Social Science Studies* 8 (6): 59. <https://doi.org/10.11114/ijsss.v8i6.4994>.
- Hemez, Paul, and Chanell Washington. 2021. "Percentage and Number of Children Living With Two Parents Has Dropped Since 1968." U.S. Census Bureau. April 12, 2021. <https://www.census.gov/library/stories/2021/04/number-of-children-living-only-with-their-mothers-has-doubled-in-past-50-years.html>.
- Internal Revenue Service. 2024. "Publication 501 (2023), Dependents, Standard Deduction, and Filing Information." January 12, 2024. <https://www.irs.gov/publications/p501>.
- Jensen, Eric. 2022. "Census Bureau Expands Focus on Improving Data for Young Children." U.S. Census Bureau. March 10, 2022. <https://www.census.gov/library/stories/2022/03/despite-efforts-census-undercount-of-young-children-persists.html>.
- Jensen, Eric, Laurel Schwede, Deborah H. Griffin, and Scott Konicki. 2018. "Investigating the 2010 Undercount of Young Children: Analysis of Complex Households." RSM 2018-20. U.S. Census Bureau. <https://www.census.gov/library/working-papers/2018/adrm/rsm2018-20.html>.
- Johnson, Janna E. 2022. "Does the Census Miss the Native-Born Children of Immigrant Mothers? Evidence from State-Level Undercount by Race and Hispanic Status." *Population Research and Policy Review* 41 (1): 139–95. <https://doi.org/10.1007/s11113-021-09651-w>.
- Jones, Maggie R., and James P. Ziliak. 2019. "The Antipoverty Impact of the EITC: New Estimates from Survey and Administrative Tax Records." CES 19-14. U.S. Census Bureau. <https://www.census.gov/library/working-papers/2019/adrm/ces-wp-19-14.html>.
- Mulrow, Edward, Ali Mushtaq, Santanu Pramanik, and Angela Fontes. 2011. "Assessment of the U.S. Census Bureau's Person Identification Validation System." NORC at the University of Chicago. <https://norc.org/content/dam/norc-org/pdfs/PVS%20Assessment%20Report%20FINAL%20JULY%202011.pdf>.
- Murphy, Patrick, and Caroline Danielson. 2018. "Census-Related Funding in California." Public Policy Institute of California. <https://www.ppic.org/publication/census-related-funding-in-california/>.
- Office of Tax Analysis. 2021. "By ZIP Code: Number of Children under Age 18 with a Social Security Number Who Are Not Found on a Tax Year 2019 or 2020 Tax Return but Who Appear on a Tax Year 2019 Form 1095 and Associated Number of Policy Holders." Department of the Treasury. <https://home.treasury.gov/system/files/131/Estimated-Counts-of-Children-Unclaimed-for-CTC-by-ZIP-Code-2019.pdf>.
- O'Hare, William P., Deborah H. Griffin, and Scott Konicki. 2019. "Investigating the 2010 Undercount of Young Children: Summary of Recent Research." U.S. Census Bureau. <https://www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/plan/final-analysis/2020-report-2010-undercount-children-summary-recent-research.html>.

- O'Hare, William P, Yeris Mayol-Garcia, Elizabeth Wildsmith, and Alicia Torres. 2016. "The Invisible Ones: How Latino Children Are Left out of Our Nation's Census Count." *Report, Child Trends Hispanic Institute and the National Association of Latino Elected Officials*.
- Population Reference Bureau. 2019. "Living Arrangement for Children, by Presence of Parents." Kidsdata.Org. December 2019. <https://www.kidsdata.org/topic/41/living-with-parents/table#fmt=470&loc=127,1657,331,1761,171,2168,345,357,324,369,362,360,2076,364,356,217,354,1663,339,2169,365,343,367,344,366,368,265,349,361,4,273,59,370,326,341,338,350,2145,359,363,340,1&tf=108&ch=1428,1427,1426,1429,1430&sortColumnId=0&sortType=asc>.
- Reamer, Andrew. 2019. "Fifty-Five Large Federal Census-Guided Spending Programs: Distribution by State." Report #5. Counting for Dollars 2020. George Washington University Institute of Public Policy. <https://gwipp.gwu.edu/counting-dollars-2020-role-decennial-census-geographic-distribution-federal-funds>.
- Rothbaum, Jonathan, Jonathan Eggleston, Adam Bee, Mark Klee, and Brian Mendez-Smith. 2021. "Addressing Nonresponse Bias in the American Community Survey during the Pandemic Using Administrative Data." American Community Survey Research and Evaluation Report Memorandum Series. U.S. Census Bureau.
- U.S. Census Bureau. 2017. "ACS Notification: Change in Methodology for Nonresponse Follow Up Data Collection." December 18, 2017. <https://www.census.gov/programs-surveys/acs/news/updates/2017.html>.
- U.S. Census Bureau. 2019. "American Community Survey and Puerto Rico Community Survey 2019 Subject Definitions." [https://www2.census.gov/programs-surveys/acs/tech\\_docs/subject\\_definitions/2019\\_ACSSubjectDefinitions.pdf](https://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2019_ACSSubjectDefinitions.pdf).
- U.S. Census Bureau. 2021. "The Undercount of Young Children." October 8, 2021. <https://www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/plan/undercount-of-young-children.html>.
- U.S. Census Bureau. 2022. "Age and Sex." American Community Survey. [https://data.census.gov/table/ACSST1Y2022.S0101?q=S0101:AgeandSex&g=010XX00US\\$0400000&moe=false&tp=false](https://data.census.gov/table/ACSST1Y2022.S0101?q=S0101:AgeandSex&g=010XX00US$0400000&moe=false&tp=false).
- U.S. Census Bureau. 2023. "How the Census Bureau Measures Poverty." Census.Gov. June 15, 2023. <https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html>.
- U.S. Census Bureau. 2024. "Census Bureau Releases Experimental Estimates of State and County Undercounts and Overcounts of Young Children in the 2020 Census." April 11, 2024. <https://www.census.gov/newsroom/press-releases/2024/undercounts-overcounts-children-2020-census.html>.
- U.S. Census Bureau. n.d. "Language Spoken at Home." Accessed August 19, 2024. <https://www.census.gov/acs/www/about/why-we-ask-each-question/language/>.
- Wagner, Deborah, and Mary Layne. 2014. "The Person Identification Validation System (PVS): Applying the Center for Administrative Records Research and Applications&#8217; (CARRA) Record Linkage Software." CARRA 2014-01. U.S. Census Bureau. <https://www.census.gov/library/working-papers/2014/adrm/carra-wp-2014-01.html>.
- Walejko, Gina, Lydia Shia, Steven Scheid, and Deborah Griffin. 2019. "Researching the Attitudes of Households Reporting Young Children: A Summary of Results from the 2020 Census Barriers, Attitudes, and Motivators Study (CBAMS) Survey." 2020 Census

Final Analysis Reports. <https://www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/plan/final-analysis/2020-report-cbams-attitudes-reporting-children.html>.